

RESPONSE

Serial Number: 10/671,324

Filing Date: September 25, 2003

Title: SYSTEM, METHOD, AND APPARATUS FOR FAST QUANTIZATION IN PERCEPTUAL AUDIO CODERS

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REMARKS

This responds to the Final Office Action mailed on August 24, 2007.

Claims 7 and 14 are amended, claims 2 and 13 are cancelled; as a result, claims 1, 3-12 and 14-33 are now pending in this application.

Claim Objections

Claims 7 and 13 are objected.

It is believed that the amended claim 7 obviate this objection.

Claim 13 is cancelled.

§103 Rejection of the Claims

Claims 1, 3-10, 12-19, and 21-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Davidson et al (U.S. Patent 6,246,345) in view of Hu et al (U.S. Patent 6,745,162).

Applicants, respectfully traverse the rejection of claims 1, 3-10, 12-19, and 21-33.

Claims 1, 3-10, 12-19 and 21-33 are respectfully asserted to distinguish over Davidson and Hu references. Hu at step 417 and col. 5, lines 41-45, describes the computation of DELTA SMR as comparing “difference in SMR for a sub-band as compared to the SMR value for the sub-band in a prior iteration of the loop” which is used for real-time encoding.

In contrast, the present independent claims 1, 5, 12, 17, 21, 25, 28 and 31 recite shaping quantization noise in spectral lines in each scale band factor by assigning quantization precision based on computed band energy ratios and SMRs for the current frame. Hu describes using only ratios of sub-band energies as described in... In contrast, the present invention recites computing energy ratios by dividing energy over sum of energies in all bands. Support for this can be found in claim 14.

Further, Hu defines iterative method for quantization for each sub-band as described in FIG. 4. In contrast, independent claims 1, 5, 12, 17, 21, 25, 28, and 31 recite performing each critical band quantization step only once a frame. Support for this can be found in FIG. 1 steps 110-150.

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Claims 3-4, 6-10, 13-16, 18-21, 22-24, 26-27, 29-30 and 32-33 are dependent directly or indirectly from independent claims 1, 5, 12, 17, 21, 25, 28 and 31 respectively, so they should be found allowable over Davidson and Hu references for the reasons presented above.

Applicants respectfully assert the Davidson and Hu references fail to support *prima facie* case of obviousness because as mention above, the cited references fail to teach or suggest all of the elements of the Applicants' invention.

For the above reasons, claims 1-10, 12-19, and 21-33 should be found allowable over Davidson in view of Hu references and request that the rejection be withdrawn.

Allowable Subject Matter

Claims 11 and 20 were allowed.

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CONCLUSION

Applicants respectfully submit that the claims 1-33 are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney to facilitate prosecution of this application.

Respectfully submitted,

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